

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A method for handling requests for web services, the method comprising the computer-implemented steps of:

receiving at a web services broker, from a source, a request for information from a particular web service that has characteristics that are described in Web Service Description Language and are published in a Universal Description, Discovery, and Integration registry;

wherein the source is a client application, separate from the web services broker, that does not have logic for directly interacting with said particular web service;

in response to receiving said request, the web services broker accessing transformation information that specifies

how to transform first data associated with said request to second data that said particular web service can use to service requests for said requested information, and

how to invoke said particular web service in a manner required by said particular web service, to obtain said requested information from said particular web service;

based on said transformation information, the web services broker performing the steps of:

transforming said first data to said second data; and

invoking, in said manner required by said particular web service, said particular web service to obtain said requested information from said particular web service.

2. (Original): The method of Claim 1, further comprising the steps of:
receiving, from said particular web service, said requested information; and
transforming, based on said transformation information, said requested information to data that said source can use.
3. (Original): The method of Claim 1, wherein said transformation information specifies how to transform a plurality of first data each from a respective source of a plurality of sources, to a plurality of second data each for a respective web service of a plurality of web services.
4. (Original): The method of Claim 1, wherein said transformation information includes a mapping of first data from a first particular source to second data that a web service can use, and a mapping of first data from a second particular source to second data that a web service can use, and wherein said first data from said first particular source has a different form than said first data from said second particular source.
5. (Original): The method of Claim 1, wherein said transformation information includes a mapping of first data from a first particular source to second data that a first web service can use, and a mapping of first data from a second particular source to said second data that said first web service can use, and wherein said first data from said first particular source has a different form than said first data from said second particular source.

6. (Original): The method of Claim 1, wherein said transformation information includes a mapping of first data from a first source to second data that a first web service can use and to second data that a second web service can use, and wherein said first web service is different than said second web service.
7. (Original): The method of Claim 1, further comprising the computer-implemented steps of:

based on said transformation information, determining whether to use RPC style of communication or messaging style of communication to invoke said particular web service.
8. (Original): The method of Claim 1, further comprising the computer-implemented steps of:

based on said transformation information, determining whether to use SOAP encoding to encode a communication for invoking said particular web service.
9. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 1.
10. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 2.

11. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 3.
12. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 4.
13. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 5.
14. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 6.
15. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 7.

16. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 8.
17. (Currently Amended): A method for handling requests for web services, the method comprising the computer-implemented steps of:
- receiving at a web services broker, from a source, a request for information, wherein
- said request includes an identification of a particular instance of said source;
- wherein the source is a client application, separate from the web services broker, that does not have logic for directly interacting with a particular web service;
- in response to receiving said request, based on said identification of said particular instance of said source, the web services broker accessing transformation information;
- wherein said transformation information includes a mapping between said identification of said particular instance of said source and an identification of [[a]]said particular web service from which said particular instance wants said requested information;
- wherein said transformation information specifies how to transform first data associated with said request to second data that said particular web service can use to service requests for said requested information; and
- based on said transformation information, the web services broker transforming said first data to said second data.

18. (Original): The method of Claim 17, wherein said identification of a particular instance of said source includes identification of a user of said source.
19. (Original): The method of Claim 17, further comprising the computer-implemented step of:
passing said second data as input to said particular web service to service said request.
20. (Original): The method of Claim 19,
wherein said transformation information specifies a mapping between said first data
output from said source and data that said particular web service can use as input
to determine said requested information; and
wherein said step of passing includes passing said second data, according to said
transformation information, as input to said particular web service to determine
said requested information.
21. (Original): The method of Claim 20,
wherein said transformation information specifies a first manner in which said particular
web service can be invoked to service requests for said requested information;
and
wherein said step of passing includes passing said second data in said first manner, to
invoke said particular web service to determine said requested information.
22. (Original): The method of Claim 21,
wherein said transformation information specifies a second manner in which said
second data is characterized so that said particular web service can be invoked to
service requests for said requested information; and

wherein said step of passing includes passing, according to said first manner, said second data that is characterized according to said second manner, to invoke said particular web service to determine said requested information.

23. (Original): The method of Claim 22, wherein said second manner includes characterizing said second data according to Simple Object Access Protocol.

24. (Original): The method of Claim 19, wherein said transformation information specifies a first manner in which said particular web service can be invoked to service requests for said requested information and a second manner in which said second data is characterized in an invocation of said particular web service; and wherein said step of passing includes passing, according to said first manner, said second data that is characterized according to said second manner, to invoke said particular web service to determine said requested information.

25. (Original): The method of Claim 17, wherein said particular web service has characteristics that are described in Web Service Description Language.

26. (Original): The method of Claim 25, wherein said particular web service has characteristics that are published in a Universal Description, Discovery, and Integration registry.

27 (Original): The method of Claim 17, further comprising the steps of: receiving, from said particular web service, said requested information; and

transforming, based on said transformation information, said requested information to data that said source can use.

28. (Original): The method of Claim 17, wherein said transformation information specifies how to transform a plurality of first data each from a respective source of a plurality of sources, to a plurality of second data each for a respective web service of a plurality of web services.
29. (Original): The method of Claim 17, wherein said transformation information includes a mapping of first data from a first particular source to second data that a web service can use, and a mapping of first data from a second particular source to second data that a web service can use, and wherein said first data from said first particular source has a different form than said first data from said second particular source.
30. (Original): The method of Claim 17, wherein said transformation information includes a mapping of first data from a first particular source to second data that a first web service can use, and a mapping of first data from a second particular source to said second data that said first web service can use, and wherein said first data from said first particular source has a different form than said first data from said second particular source.
31. (Original): The method of Claim 17, wherein said transformation information includes a mapping of first data from a first source to second data that a first web service can use and to second data that a second web service can use, and wherein said first web service is different than said second web service.

32. (Original): The method of Claim 31, wherein said first web service and said second web service can determine the same requested information, and wherein said second data that said first web service can use is different from said second data that said second web service can use.
33. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 17.
34. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 18.
35. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 19.
36. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 20.

37. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 21.
38. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 22.
39. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 23.
40. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 24.
41. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 25.

42. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 26.
43. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 27.
44. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 28.
45. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 29.
46. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 30.

47. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 31.
48. (Currently Amended): A ~~computer-readable medium carrying~~computer-readable storage medium storing one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 32.
49. (Currently Amended): A system for handling requests for web services, the system comprising:
- means for receiving at a web services broker, from a source, a request for information from a particular web service that has characteristics that are described in Web Service Description Language and are published in a Universal Description, Discovery, and Integration registry;
- wherein the source is a client application, separate from the web services broker, that does not have logic for directly interacting with said particular web service;
- means for the web services broker accessing, in response to receiving said request, transformation information that specifies
- how to transform first data associated with said request to second data that said particular web service can use to service requests for said requested information, and

how to invoke said particular web service in a manner required by said particular web service, to obtain said requested information from said particular web service;

means for the web services broker transforming, based on said transformation information, said first data to said second data; and

means for the web services broker invoking, based on said transformation information, said particular web service in said manner required by said particular web service to obtain said requested information.

50. (Currently Amended): An system for handling requests for web services, the system comprising:

means for receiving at a web services broker, from a source, a request for information, wherein said request includes an identification of a particular instance of said source;

wherein the source is a client application, separate from the web services broker, that does not have logic for directly interacting with a particular web service;

means for the web services broker accessing transformation information in response to receiving said request and based on said identification of said particular instance of said source;

wherein said transformation information includes a mapping between said identification of said particular instance of said source and an identification of [[a]]said particular web service from which said particular instance wants said requested information;

wherein said transformation information specifies how to transform first data associated with said request to second data that said particular web service can use to service requests for said requested information; and means for the web services broker transforming said first data to said second data based on said transformation information.